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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/652,868

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Yousef M. Jarrah

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HARNESS, DICKEY & PIERCE, P.L.C.
P.O. BOX 828
BLOOMFIELD HILLS, MI 48303

EXAMINER

WIEHE, NATHANIEL EDWARD

ART UNIT

PAPER NUMBER

3745

MAIL DATE

DELIVERY MODE

09/18/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/652,868	Applicant(s) JARRAH, YOUSEF M.	
	Examiner NATHANIEL WIEHE	Art Unit 3745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 July 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 11-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 11-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 10 July 2008 have been fully considered but they are not persuasive.

Applicant argues that the limitation of “an inducer... including a height component in said axial direction (Z) that is substantially five to seven percent of an outer diameter of said impeller” would not have been obvious. Applicant also notes that the claims conform with rule 37 CFR 1.73 and to MPEP 2107.02(II). The examiner respectfully disagrees. While the claims are appropriate according to the rules, the true question is whether this individual limitation is obvious. Applicant expressly notes, “the instant application states that *three elements must be met* '[t]o ensure that a received fluid stream remains attached to the impeller blades 14 under any flow condition’” [emphasis added]. Thus, the specification establishes criticality to the combination of all three elements, but does not render each individual element non-obvious when considered on its own.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adonakis (6,499,954) in view of Atkinson (2,819,012). Adonakis discloses a

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compressor having a vaneless diffuser in fluid communication with a volute (28) and an impeller (10) directing a fluid stream to the volute having a hub (16) and a plurality of blades (FB) extending spirally and having no axial variation, i.e. the blade is defined by a single radius (Adonakis column 4, lines 15-17). The leading edges (LE) of the blades (FB) are located proximate to the hub while the trailing edges (TE) are proximate the volute (28). Applicant claims that a blade surface is defined by a polar angle as a function of the radius that appear to form a generally spiral shaped blade surface and since applicant has not further specified or defined the surface, the spirally oriented blades of Adonakis met the claim limitation. Adonakis does not disclose the use of an inducer. Atkinson discloses a centrifugal impeller (10) including a plurality of blades (24) and an inducer (23) formed integrally with the blades and extending along the entire leading edge. The inducer extends in a predominately axial direction. Further, Atkinson notes that the length of the inducer may be limited in compliance with rotor or tool requirements (Atkinson column 4, lines 15-20). The inducer of Atkinson accelerates the incoming flow in the circumferentially direction providing a smooth and uniform flow into the impeller blades thereby improving the efficiency of the impeller (Atkinson column 2, line 70- column 3, line 6). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the impeller of Adonakis by including an inducer as taught by Atkinson for the purpose of accelerating the incoming flow in the circumferential direction thereby improving efficiency of the impeller. The modified invention of Adonakis does not disclose the use of an inducer with a height between five to seven percent of the impeller outer diameter.

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Since applicant has not disclosed that having an inducer height that is substantially five to seven percent of the outer diameter of the impeller solves any stated problem or is for any particular purpose above the fact that the inducer improves flow efficiency and it appears that the inducer Atkinson of would perform equally well with an inducer having an axial height that is five to seven percent of the diameter of the induce as claimed by applicant, it would have been an obvious matter of design choice to further modify the invention of Adonakis by utilizing the dimension as claimed for the purpose of improving the flow efficiency.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NATHANIEL WIEHE whose telephone number is

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(571)272-8648. The examiner can normally be reached on Mon.-Thur. and alternate Fri., 7am-4:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look can be reached on (571)272-4820. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/NATHAN WIEHE/
Nathan Wiehe
Examiner
Art Unit 3745

/Edward K. Look/
Supervisory Patent Examiner, Art Unit 3745